

CLAIMS

1. A coated stent comprising:
a stent, the stent having a stent inner diameter and a stent outer diameter; and
an eccentric coating, the eccentric coating having a first eccentric portion and a second eccentric portion, the first eccentric portion disposed on the stent inner diameter and the second eccentric portion disposed on the stent outer diameter;
wherein the first eccentric portion and the second eccentric portion have different thicknesses.
2. The coated stent of claim 1 wherein the second eccentric portion is thicker than the first eccentric portion.
3. The coated stent of claim 1 wherein the first eccentric portion is thicker than the second eccentric portion.
4. The coated stent of claim 1 wherein the eccentric coating includes a therapeutic agent.
5. The coated stent of claim 4 further comprising a cap coating disposed on the eccentric coating, the cap coating regulating elution of the therapeutic agent from the eccentric coating.
6. The coated stent of claim 1 further comprising a cap coating disposed on the eccentric coating.
7. The coated stent of claim 6 wherein the cap coating is of substantially uniform thickness.

8. The coated stent of claim 6 wherein the cap coating includes a therapeutic agent.

9. The coated stent of claim 6 wherein the cap coating further comprises a first cap portion and a second cap portion, the first cap portion disposed on the first eccentric portion and the second cap portion disposed on the second eccentric portion.

10. The coated stent of claim 9 wherein the second cap portion is thicker than the first cap portion.

11. The coated stent of claim 9 wherein the first cap portion is thicker than the second cap portion.

12. The coated stent of claim 9 wherein the second cap portion is biodegradable.

13. The coated stent of claim 9 wherein the first cap portion includes one therapeutic agent and the second cap portion includes a different therapeutic agent.

14. A method for producing a coated stent comprising:
providing a stent;
mixing a polymer and a therapeutic agent with a solvent to form a polymer/drug solution;
applying the polymer/drug solution to the stent as an eccentric layer;
and
curing the eccentric layer to form an eccentric coating.

15. The method of claim 14 wherein the stent has a stent outer diameter, and applying the polymer/drug solution further comprises:

mounting the stent on a coating fixture having a fixture mandrel inside the stent; and

spraying the polymer/drug solution at the stent outer diameter in the direction of the fixture mandrel.

16. The method of claim 14 wherein the stent has a stent outer diameter and a stent inner diameter, and applying the polymer/drug solution further comprises:

applying the polymer/drug solution to the stent inner diameter with an inner pad; and

applying the polymer/drug solution to the stent outer diameter with an outer pad.

17. The method of claim 14 wherein applying the polymer/drug solution to the stent as an eccentric layer further comprises applying the polymer/drug solution by an application method selected from the group consisting of painting, spraying, dipping, wiping, electrostatic deposition, vapor deposition, epitaxial growth, and combinations thereof.

18. The method of claim 14 further comprising:

mixing a polymer with a solvent to form a polymer solution;

applying the polymer solution to the eccentric coating as a cap layer;

and

curing the cap layer to form a cap coating.

19. The method of claim 18 wherein the stent has a stent outer diameter and a stent inner diameter, and applying the polymer solution further comprises:

applying the polymer solution to the stent inner diameter with an inner pad; and

applying the polymer solution to the stent outer diameter with an outer pad.

20. The method of claim 18 wherein applying the polymer solution further comprises applying the polymer solution by an application method selected from the group consisting of painting, spraying, dipping, wiping, electrostatic deposition, vapor deposition, epitaxial growth, and combinations thereof.